

REMARKS

By this Amendment, claims 1-4 are canceled and claims 8-31 are added. No new matter has been added.

Applicants respectfully acknowledge the indication that claims 5-7 are allowed.

Applicants gratefully acknowledge and appreciate the courtesy extended to Applicants' representatives at the May 22 personal interview. Arguments presented to the Examiner are incorporated herein.

I. THE CLAIMS SATISFY FORMAL REQUIREMENTS

The Office Action rejects claims 3-4 under 35 U.S.C. §112, second paragraph. By this Amendment, rejected claims 3 and 4 are canceled. However, claims 16 and 17 are added to recite the combination of a die and 2-part mixed powder lubricant. Claims 18 and 19 further define properties of the now recited die of new claims 16 and 17, respectively. It is respectfully submitted that claims 18 and 19 are concise and definite and further limit the claims. Withdrawal of the §112 rejection is respectfully requested.

II. THE CLAIMS DEFINE PATENTABLE SUBJECT MATTER

The Office Action also rejects claims 1-4 under 35 U.S.C. §102(b) as being anticipated by Semel et al. (U.S. Patent No. 5,256,185). This rejection is respectfully traversed.

Claims 1-4 have been canceled in favor of new claims 8-31. Independent claim 8 recites a lubricant for die lubrication comprising a mixed powder of at least two different lubricants that is reliably electrified in order to be adherable to a surface of a die by electrification. Similarly, new independent claim 16 positively recites a die having a lubricant that adheres to the surface of the die by electrification. The lubricant comprises a mixed powder of two different lubricants, each having a melting point higher than a

predetermined temperature of a compaction pressure applied to the die. It is respectfully submitted that Semel et al. does not disclose, teach or suggest these claimed features.

In particular, Semel et al. does not teach, suggest or disclose a die that has a lubricant adhered to the surface of the die by electrification. On the contrary, Semel et al. teaches that the lubricant is specifically added to and mixed with the metallurgical powder composition. The metallurgical powder composition is prepared by forming a dry mixture of an iron based powder, at least one alloying powder, and a first amount of an organic lubricant. (Col. 3, lines 29-35.) An organic binding agent is then incorporated to the drying mixture of the iron base powder, alloying powder and lubricant (col. 5, lines 48-50). After the binder treatment step has been completed, a second amount of organic lubricant is mixed with the now dried powder composition (col. 6, lines 33-35). As such, Semel et al. fails to teach a separate two-part lubricant as claimed that is readily electrified in order to be adhered to the surface of the die by electrification. Therefore, Semel et al. fails to disclose the claimed invention.

It is respectfully submitted that claims 8 and 16 are patentable over Semel et al. Further, it is respectfully submitted that claims 9, 14 and 17-20, which they depend therefrom, are also patentable for their dependence on an allowable claim, as well as for the additional features they recite. Withdrawal of the rejection is respectfully requested.

New claims 10-13, 25 and 26 also define patentable subject matter over Semel. Claims 10-13, 25 and 26 recite two component powder die lubricants with each component having a melting point above 45°C, 70°C, 80°C, 130°C, 150°C and 200°C, respectively. These are supported, for example, on page 7 lines 2-5, page 7, lines 12-14, and Table 1. Semel does not mention a specific melting point for the lubricants employed therein. One of ordinary skill in the art would recognize that Semel only teaches lubricants that are solid at room temperature. Furthermore, it is respectfully submitted that Semel does not appreciate

the advantages of die lubricants having the claimed melting points. Therefore, Semel does not anticipate or render obvious new claims 10-13, 25 and 26.

Additionally, it is respectfully submitted that it would not be inherent that lubricants of Group A - Group I would have the recited melting points. As shown in the attached table, which shows various different materials from within claimed groups having different melting points that are below various claimed ranges. In view of the table, it is respectfully submitted that it would not be inherent from the teachings of Semel to provide two lubricants from the recited groups that are both above the recited temperature limitation.

M.P. range	Material	M.P. (°C)	Group
Less than 45°C	Zinc Naphtenate	28	A
	Nickel Oleate	18-20	A
	Lead Naphtenate	30	A
Less than 70°C	Cobalt Palmitate	52	A
	Tin Stearate	48	A
	Lead Linolate	55	A
	ethylene-vinyl carbonate copolymer	65-90	B
	Calcium Ricinolate	74	A
	Cobalt naphtenate	77	A
Less than 80°C	Zinc Oleate	70	A
	Copper Laurate	113-115	A
	Copper Palmitate	120	A
Less than 130°C	Magnesium Palmitate	108-115	A
	Ainc Stearate	120	A
	Barium Ricinolate	116-124	A
	Low Density polyethylene	90-130	B
	High Density Polyethylene with low melting point	120-130	B
	Ultra-high molecular weight polyethylene with low melting point	125-130	C

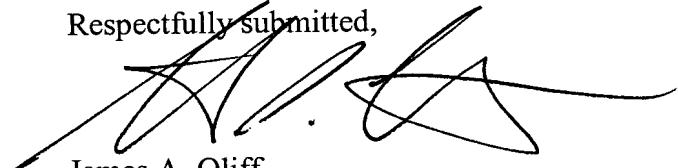
New dependent claims 9, 20 and 21 are added specifying a particle size of the lubricant. Support is found, for example, at page 8, lines 1-10. Claims 9, 20 and 21 are allowable for their dependence on base claims 8, 16 and 5, respectively, as well as for the additional features recited therein.

New claims 22-24 recite a method for lubricating a die. Claim 22 includes providing a mixed powder of at least two different lubricants and adhering the at least two lubricants to the molding surface by electrification. Semel provides no such teaching.

In view of the foregoing amendments and remarks, Applicants submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,


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